6/3,K,AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

8/15/00

10474331 20312477
Target antigens for **prostate cancer** immunotherapy.
Saffran DC; Reiter RE; Jakobovits A; Witte ON
UroGenesys, Inc, Santa Monica, CA 90404, USA.
Cancer and metastasis reviews (UNITED STATES) 1999, 18 (4) p437-49,
ISSN 0891-9992 Journal Code: C9H
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC
The detection and **treatment** of **prostate cancer** has been markedly improved by the use of Prostate-Specific Antigen (PSA) as a serological biomarker for disease. However, even after surgical intervention and hormone ablation therapy, a significant proportion of patients progress to advanced metastatic disease, for which there is no cure. An important goal has become the identification of antigens in advanced stage **prostate cancer** that represent targets for therapy. Recently, great progress has been made to utilize immunological therapies to **treat** cancer. Monoclonal antibody therapy has been successfully approved for the **treatment** of breast cancer and B-cell lymphoma, and multiple clinical trails are currently in progress in a variety of cancers, including **prostate cancer**. Pre-clinical and clinical studies are also underway to evaluate cancer vaccine approaches directed against antigens that are highly expressed in prostate and other cancers. This article describes several target antigens expressed in **prostate cancer** and immunological approaches directed against them that may be effective for **treating prostate cancer** patients.

Target antigens for **prostate cancer** immunotherapy.
The detection and **treatment** of **prostate cancer** has been markedly improved by the use of Prostate-Specific Antigen (PSA) as a serological...

6/3,K,AB/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10232697 20046038
Monoclonal antibodies: will they become an integral part of the evaluation and **treatment** of **prostate cancer**--focus on **prostate**-specific membrane antigen?
Chang SS; Bander NH; Heston WD
Department of Urology, Memorial Sloan-Kettering Cancer Center, New York, NY 10021, USA.
Current opinion in urology (UNITED STATES) Sep 1999, 9 (5) p391-5, ISSN 0963-0643 Journal Code: DGP
Contract/Grant No.: DK/CA 47650, DK, NIDDK
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL
Over the past two decades, monoclonal antibody technology has had an increasing impact on clinical diagnostic and therapeutic options, and this is true in the realm of managing **prostate cancer**. Several targets such as **prostate** -specific antigen and prostatic acid phosphatase as well as, more recently, angiogenic antigens such as vascular endothelial growth factor have been examined for therapy. Prostate-specific membrane antigen, a type II integral membrane glycoprotein initially characterized by the monoclonal antibody 7E11, has shown promise. Recent evidence suggests that prostate-specific membrane antigen is also expressed in tumor-associated neovasculature of a wide variety of **malignant** neoplasms. With its expression in **prostate** secretory-acinar epithelium and the prostate and in the neovasculature associated with tumors, prostate-specific membrane antigen represents an excellent antigenic target for monoclonal antibody diagnostic and therapeutic options. As research continues, the role of monoclonal antibody imaging and therapy will become increasingly important in the management of **prostate cancer**.

Monoclonal antibodies: will they become an integral part of the evaluation and **treatment** of **prostate cancer**--focus on **prostate**-specific membrane antigen?
... on clinical diagnostic and therapeutic options, and this is true in the realm of managing **prostate cancer**. Several targets such as **prostate** -specific antigen and prostatic acid phosphatase as well as, more recently, angiogenic antigens such as...

... specific membrane antigen is also expressed in tumor-associated neovasculature of a wide variety of **malignant** neoplasms. With its expression in **prostate** secretory-acinar epithelium and the prostate

9942465 99297012

Intravenous injection of an immunoconjugate (anti-PSA-IgG conjugated to 5-fluoro-2'-deoxyuridine) selectively inhibits cell proliferation and induces cell death in human **prostate cancer** cell tumors grown in nude mice.

Sinha AA; Quast BJ; Reddy PK; Elson MK; Wilson MJ

Department of Genetics, University of Minnesota, St. Paul, USA.

Anticancer research (GREECE) Mar-Apr 1999, 19 (2A) p893-902, ISSN 0250-7005 Journal Code: 59L

Contract/Grant No.: DK-51348, DK, NIDDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Current chemotherapeutic and/or endocrine **treatments** for adenocarcinoma of the prostate are not delivered selectively to **prostate cancer** cells, therefore, they are used in very high doses that induce many unpleasant side effects in patients. New approaches are, therefore, needed to deliver drugs directly to **prostate cancer** cells to improve **treatment** effects. We hypothesized that **antibody** immunoglobulin G (IgG) against human **prostate specific antigen** (PSA) (anti-PSA-IgG) could function as a carrier protein for conjugated chemotherapeutic drugs (such as 5-fluoro-2'-deoxyuridine, doxorubicin, etc.) and that the immunoconjugate could be delivered selectively to PSA-producing neoplastic prostate. Immunoconjugate would then preferentially inhibit cell proliferation and induce cell death in PSA-producing tumor cells, but not in non-PSA-producing **prostate cancer** cells or other solid organs of the host. The short-term **treatment** effect could be assessed by measuring cell death and cell proliferation in tumor-bearing animals. We tested our hypothesis by intravenously injecting an immunoconjugate (anti-PSA-IgG-5-fu-2'-d) into nude mice with subcutaneous PSA-producing LNCaP or non-PSA-producing Du-145 prostate tumors. During 5 days of **treatment** , we observed that immunoconjugate was retained preferentially in PSA-producing LNCaP tumors where it produced cytotoxic effects in neoplastic prostate cells as revealed by decreased cell proliferation and increased cell death, but similar effects were not observed in non-PSA-producing Du-145 tumor cells or mouse organs. Analysis of untreated control mouse with LNCaP tumor, anti-PSA-IgG alone, anti-irrelevant-IgG-drug complex, and drug alone **treatments** indicated that there was little or no cytotoxic effects of these **treatments** on LNCaP and Du-145 tumors, and host organs. Our analysis of control and experimental data showed that the immunoconjugate was highly specific in imparting cytotoxic effects on LNCaP prostate tumors, but not on Du-145 tumors and mouse organs. Thus, we have shown that the immunoconjugate selectively delivered a chemotherapeutic drug to PSA-producing **prostate tumor** cells where it produced measurable cytotoxic effects on cell proliferation and cell death. This is the first report to show a successful delivery of a chemotherapeutic drug in the immunoconjugate to PSA-producing LNCaP prostate tumors in nude mice and without induc

9489981 98192203

Interferon-gamma and monoclonal antibody 131I-labeled CC49: outcomes in patients with androgen-independent **prostate cancer**.

Slovin SF; Scher HI; Divgi CR; Reuter V; Sgouros G; Moore M; Weingard K; Pettengall R; Imbriaco M; El-Shirbiny A; Finn R; Bronstein J; Brett C; Milenic D; Dnistrian A; Shapiro L; Schlom J; Larson SM

Department of Medicine, Memorial Sloan-Kettering Cancer Center, New York, New York 10021, USA.

Clinical cancer research (UNITED STATES) Mar 1998, 4 (3) p643-51, ISSN 1078-0432 Journal Code: C2H

Contract/Grant No.: CA09512, CA, NCI; CA05826, CA, NCI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

To assess the tumor targeting, safety, and efficacy of monoclonal antibody 131I-labeled CC49 in patients with androgen-independent **prostate cancer** , 16 patients received 75 mCi/m2 of the radiolabeled antibody after 7 days of IFN-gamma pretreatment. Sequential tumor biopsies in three patients showed a median 5-fold (range, 2-6-fold) increase in the proportion of cells staining positively for the TAG-72 antigen, whereas one showed a decrease in staining. Fourteen patients received 131I-labeled CC49, whereas 2 showed a disease-related decrease in performance status, precluding antibody **treatment** . The antibody localized to sites of metastatic androgen-independent **prostate cancer** in 86% (12 of 14; 95% confidence interval, 57-95%) of cases. Both osseous and extraosseous sites were visualized, and in six (42%) patients, more areas were visible when the radioimmunoconjugate was used than were apparent when conventional scanning techniques were used. The localization of the conjugate in the marrow cavity was usually a site not visualized by the radionuclide bone scan, in which the isotope localizes primarily to the tumor-bone interface. The dose-limiting toxicity was thrombocytopenia because five (36%) patients showed grade IV and seven (50%) showed grade III effects. In addition, six (42%) patients, four of whom were hospitalized, showed a flare in baseline pain, and four showed a decrease in pain. No patient showed a >50% decline in prostate-specific antigen, although radionuclide bone scans remained stable in four cases for a median of 4 months. The results are consistent with dosimetry estimates showing that the delivered dose to tumor was subtherapeutic and suggest that approaches that exclusively target the bone tumor interface or the marrow stroma may be unable to completely eradicate disease in the marrow cavity. For CC49, improving outcomes would require repetitive dosing, which was precluded by the rapid development of a human antimouse antibody response.

Interferon-gamma and monoclonal antibody 131I-labeled CC49: outcomes in patients with androgen-independent **prostate cancer**.

... targeting, safety, and efficacy of monoclonal antibody 131I-labeled CC49 in patients with androgen-independent **prostate cancer**, 16 patients received 75 mCi/m2 of the radiolabeled antibody after 7 days of IFN...

... 131I-labeled CC49, whereas 2 showed a disease-related decrease in performance status, precluding antibody **treatment** . The antibody localized to sites of metastatic androgen-independent **prostate cancer** in 86% (12 of 14; 95% confidence interval, 57-95%) of cases. Both osseous and...

...; Radionuclide Imaging--RI; Prostatic Neoplasms--Radiotherapy--RT; Tomography, Emission-Computed; Tomography, Emission-Computed, Single-Photon ; **Treatment** Outcome

Chemical Name: **Prostate-Specific Antigen**; (**tumor** -associated antigen 72; (**Antibodies**, Monoclonal; (Antigens, Neoplasm;

(Glycoproteins; (Iodine Radioisotopes; (Interferon Type II

ALOG(R)File 34:SciSearch(R) Cited Ref Sci

02566310 Genuine Article#: LM449 Number of References: 22
Title: PR1 - A MONOCLONAL-ANTIBODY THAT REACTS WITH AN ANTIGEN ON THE SURFACE OF NORMAL AND MALIGNANT PROSTATE CELLS
Author(s): PASTAN I; LOVELACE E; RUTHERFORD AV; KUNWAR S; WILLINGHAM MC; PEEHL DM
Corporate Source: NCI,DIV CANC BIOL DIAGN & CTR,MOLEC BIOL LAB,BLDG 37,RM 4E16/BETHESDA//MD/20892; STANFORD UNIV,MED CTR,DEPT UROL/STANFORD//CA/94305; MED UNIV S CAROLINA,DEPT PATHOL & LAB MED,DIV ANAT PATOL/CHARLESTON//SC/29425
Journal: JOURNAL OF THE NATIONAL CANCER INSTITUTE, 1993, V85, N14 (JUL 21) , P1149-1154
ISSN: 0027-8874
Language: ENGLISH Document Type: NOTE
Abstract: Background: The principal treatment for prostate cancer is surgery; prostate cancer is resistant to the common anticancer drugs. The only useful therapy for metastases involves diminishing testosterone levels by orchiectomy or administration of drugs, either of which may increase survival time. One approach to prostate cancer treatment is to use a monoclonal antibody (MAb) to target cytotoxic substances to these cancer cells. The MAbs available either do not react uniformly with prostate cancer cells or react with normal tissues. Thus, a new MAb is needed. Purpose: The goal of this study was to isolate an MAb that reacts with an antigen present on the surface of prostate cancer cells. Methods: A strain of prostate cancer cells was isolated from a prostate cancer specimen, grown for 2-4 weeks in short-term culture, and used to immunize BALB/c mice. Hybridomas were then prepared by using spleen cells from the immunized mice. One hybridoma produced an MAb (PR1) that reacted with prostate cancers. Results: MAb PR1 is an IgM(kappa) subtype that reacts uniformly with the surface of most (25 of 26) adenocarcinomas of the prostate. It also reacts with the surface antigen on normal prostate epithelial cells and on cells from benign prostatic hyperplasia. MAb PR1 reacts with a limited number of normal tissues including a subset of principal cells located in the collecting ducts of the kidney. Conclusion: We conclude that MAb PR1 reacts with a differentiation antigen present in normal prostate and that this antigen continues to be expressed on almost all adenocarcinomas of the prostate. Implications: This antibody may be useful for the diagnosis of or therapy for prostate cancer.

Title: PR1 - A MONOCLONAL-ANTIBODY THAT REACTS WITH AN ANTIGEN ON THE SURFACE OF NORMAL AND MALIGNANT PROSTATE CELLS
Abstract: Background: The principal treatment for prostate cancer is surgery; prostate cancer is resistant to

```
     ---  -----  -----------
?
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 55 scisearch 340

       15aug00 13:10:49 User231882 Session D675.2
            $0.00    0.056 DialUnits File410
     $0.00  Estimated cost File410
     $0.01  TYMNET
     $0.01  Estimated cost this search
     $0.02  Estimated total session cost   0.224 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R)  1966-2000/Oct W1
         (c) format only 2000 Dialog Corporation
  File  55:Biosis Previews(R)  1993-2000/Aug W2
         (c) 2000 BIOSIS
  File  34:SciSearch(R) Cited Ref Sci  1990-2000/Aug W1
         (c) 2000 Inst for Sci Info
  File 434:SciSearch(R) Cited Ref Sci  1974-1989/Dec
         (c) 1998 Inst for Sci Info
  File 340:CLAIMS(R)/US Patent  1950-00/Aug 01
         (c) 2000 IFI/CLAIMS(r)

      Set  Items  Description
      ---  -----  -----------
? s antibod? (5n)(prostate(w)specific(w)antigen)

         1165264  ANTIBOD?
          103900  PROSTATE
         1651634  SPECIFIC
          616740  ANTIGEN
      S1     426  ANTIBOD? (5N)(PROSTATE(W)SPECIFIC(W)ANTIGEN)
? s treat?

      S2 3413478  TREAT?
? s s1 and s2

             426  S1
         3413478  S2
      S3      85  S1 AND S2
? s prostate(5n)(cancer or tumor or malignan?)

          103900  PROSTATE
          897644  CANCER
          992605  TUMOR
          400195  MALIGNAN?
      S4   49648  PROSTATE(5N)(CANCER OR TUMOR OR MALIGNAN?)
? s s3 and s4

              85  S3
           49648  S4
      S5      53  S3 AND S4
? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.
```

...examined 50 records (50)
...completed examining records
S6 41 RD (unique items)
? t s6/3,k,ab/1-41

6/3,K,AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10474331 20312477
Target antigens for **prostate cancer** immunotherapy.
Saffran DC; Reiter RE; Jakobovits A; Witte ON
UroGenesys, Inc, Santa Monica, CA 90404, USA.
Cancer and metastasis reviews (UNITED STATES) 1999, 18 (4) p437-49,
ISSN 0891-9992 Journal Code: C9H
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC
The detection and **treatment** of **prostate cancer** has been markedly improved by the use of Prostate-Specific Antigen (PSA) as a serological biomarker for disease. However, even after surgical intervention and hormone ablation therapy, a significant proportion of patients progress to advanced metastatic disease, for which there is no cure. An important goal has become the identification of antigens in advanced stage **prostate cancer** that represent targets for therapy. Recently, great progress has been made to utilize immunological therapies to **treat** cancer. Monoclonal antibody therapy has been successfully approved for the **treatment** of breast cancer and B-cell lymphoma, and multiple clinical trails are currently in progress in a variety of cancers, including **prostate cancer**. Pre-clinical and clinical studies are also underway to evaluate cancer vaccine approaches directed against antigens that are highly expressed in prostate and other cancers. This article describes several target antigens expressed in **prostate cancer** and immunological approaches directed against them that may be effective for **treating prostate cancer** patients.

Target antigens for **prostate cancer** immunotherapy.
The detection and **treatment** of **prostate cancer** has been markedly improved by the use of Prostate-Specific Antigen (PSA) as a serological...

... is no cure. An important goal has become the identification of antigens in advanced stage **prostate cancer** that represent targets for therapy. Recently, great progress has been made to utilize immunological therapies to **treat** cancer. Monoclonal antibody therapy has been successfully approved for the **treatment** of breast cancer and B-cell lymphoma, and multiple clinical trails are currently in progress in a variety of cancers, including **prostate cancer**. Pre-clinical and clinical studies are also underway to evaluate cancer vaccine approaches directed against...

... highly expressed in prostate and other cancers. This article describes

```
      Set  Items  Description
        ---  -----  -----------
? s psa or prostate(w)specific(w)antigen

            16836  PSA
           103900  PROSTATE
          1651634  SPECIFIC
           616740  ANTIGEN
            19076  PROSTATE(W)SPECIFIC(W)ANTIGEN
       S1   24736  PSA OR PROSTATE(W)SPECIFIC(W)ANTIGEN
? s treat?

       S2 3413478  TREAT?
? s s1 and s2

            24736  S1
          3413478  S2
       S3    7464  S1 AND S2
? s cancer? or tumor? or malignan?

           934811  CANCER?
          1231230  TUMOR?
           400195  MALIGNAN?
       S4 2017844  CANCER? OR TUMOR? OR MALIGNAN?
? s s3 and s4

             7464  S3
          2017844  S4
       S5    6114  S3 AND S4
? s unpredictab?

       S6   12545  UNPREDICTAB?
? s s5 and s6

            6114  S5
           12545  S6
       S7       4  S5 AND S6
? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.
...completed examining records
       S8       2  RD (unique items)
? t s8/3,k,ab/1-2


 8/3,K,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2000 Dialog Corporation. All rts. reserv.

09559636   98346858
  Neural  network  analysis  of  combined  conventional  and  experimental
prognostic markers in prostate cancer: a pilot study.
  Naguib RN; Robinson MC; Neal DE; Hamdy FC
  Department  of  Electrical  and  Electronic  Engineering,  University  of
Newcastle upon Tyne, UK.
  British  journal  of cancer (SCOTLAND)  Jul 1998,  78 (2) p246-50,  ISSN
0007-0920   Journal Code: AV4
```

Languages: ENGLISH
Document type: JOURNAL ARTICLE

Prostate **cancer** is the second most common **malignancy** in men in the UK. The disease is **unpredictable** in its behaviour and, at present, no single investigative method allows clinicians to differentiate between tumours that will progress and those that will remain quiescent. There is an increasing need for novel means to predict prognosis and outcome of the disease. The aim of this study was to assess the value of artificial neural networks in predicting outcome in prostate **cancer** in comparison with statistical methods, using a combination of conventional and experimental biological markers. Forty-one patients with different stages and grades of prostate **cancer** undergoing a variety of **treatments** were analysed. Artificial neural networks were used as follows: eight input neurons consisting of six conventional factors (age, stage, bone scan findings, grade, serum **PSA**, **treatment**) and two experimental markers (immunostaining for bcl-2 and p53, which are both apoptosis-regulating genes). Twenty-one patients were used for training and 20 for testing. A total of 80% of the patients were correctly classified regarding outcome using the combination of factors. When both bcl-2 and p53 immunoreactivity were excluded from the analysis, correct prediction of the outcome was achieved in only 60% of the patients (P = 0.0032). This study was able to demonstrate the value of artificial neural networks in the analysis of prognostic markers in prostate **cancer**. In addition, the potential for using this technology to evaluate novel markers is highlighted. Further large-scale analyses are required to incorporate this methodology into routine clinical practice.

Neural network analysis of combined conventional and experimental prognostic markers in prostate **cancer**: a pilot study.

Prostate **cancer** is the second most common **malignancy** in men in the UK. The disease is **unpredictable** in its behaviour and, at present, no single investigative method allows clinicians to differentiate between...

... study was to assess the value of artificial neural networks in predicting outcome in prostate **cancer** in comparison with statistical methods, using a combination of conventional and experimental biological markers. Forty-one patients with different stages and grades of prostate **cancer** undergoing a variety of **treatments** were analysed. Artificial neural networks were used as follows: eight input neurons consisting of six conventional factors (age, stage, bone scan findings, grade, serum **PSA**, **treatment**) and two experimental markers (immunostaining for bcl-2 and p53, which are both apoptosis-regulating...

18/3,K,AB/38 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

02566310 Genuine Article#: LM449 Number of References: 22
Title: PR1 - A MONOCLONAL-ANTIBODY THAT REACTS WITH AN ANTIGEN ON THE SURFACE OF NORMAL AND **MALIGNANT PROSTATE** CELLS
Author(s): PASTAN I; LOVELACE E; RUTHERFORD AV; KUNWAR S; WILLINGHAM MC; PEEHL DM
Corporate Source: NCI,DIV CANC BIOL DIAGN & CTR,MOLEC BIOL LAB,BLDG 37,RM 4E16/BETHESDA//MD/20892; STANFORD UNIV,MED CTR,DEPT UROL/STANFORD//CA/94305; MED UNIV S CAROLINA,DEPT PATHOL & LAB MED,DIV ANAT PATOL/CHARLESTON//SC/29425
Journal: JOURNAL OF THE NATIONAL CANCER INSTITUTE, 1993, V85, N14 (JUL 21) , P1149-1154
ISSN: 0027-8874
Language: ENGLISH Document Type: NOTE
Abstract: Background: The principal **treatment** for **prostate cancer** is surgery; **prostate cancer** is resistant to the common anticancer drugs. The only useful therapy for metastases involves diminishing testosterone levels by orchiectomy or administration of drugs, either of which may increase survival time. One approach to **prostate cancer treatment** is to use a monoclonal antibody (MAb) to target cytotoxic substances to these cancer cells. The MAbs available either do not react uniformly with **prostate cancer** cells or react with normal tissues. Thus, a new MAb is needed. Purpose: The goal of this study was to isolate an MAb that reacts with an antigen present on the surface of **prostate cancer** cells. Methods: A strain of **prostate cancer** cells was isolated from a **prostate cancer** specimen, grown for 2-4 weeks in short-term culture, and used to immunize BALB/c mice. Hybridomas were then prepared by using spleen cells from the immunized mice. One hybridoma produced an MAb (PR1) that reacted with prostate cancers. Results: MAb PR1 is an IgM(kappa) subtype that reacts uniformly with the surface of most (25 of 26) adenocarcinomas of the prostate. It also reacts with the surface antigen on normal prostate epithelial cells and on cells from benign prostatic hyperplasia. MAb PR1 reacts with a limited number of normal tissues including a subset of principal cells located in the collecting ducts of the kidney. Conclusion: We conclude that MAb PR1 reacts with a differentiation antigen present in normal prostate and that this antigen continues to be expressed on almost all adenocarcinomas of the prostate. Implications: This antibody may be useful for the diagnosis of or therapy for **prostate cancer**.

Title: PR1 - A MONOCLONAL-ANTIBODY THAT REACTS WITH AN ANTIGEN ON THE SURFACE OF NORMAL AND **MALIGNANT PROSTATE** CELLS
Abstract: Background: The principal **treatment** for **prostate cancer** is surgery; **prostate cancer** is resistant to the common anticancer drugs. The only useful therapy for metastases

18/3,K,AB/36 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

08736924 Genuine Article#: 323EN Number of References: 32
Title: Expression of Lewis carbohydrate antigens and chromogranin A in human prostatic cancer
Author(s): Mariano A; DiCarlo A; Santonastaso C; Oliva A; DArmiento M; Macchia V (REPRINT)
Corporate Source: UNIV NAPLES FEDERICO II,DIPARTIMENTO BIOL & PATOL CELLULARE & MOL L CALIF, VIA SERGIO PANSINI 5/I-80131 NAPLES//ITALY/ (REPRINT); UNIV NAPLES FEDERICO II,DIPARTIMENTO BIOL & PATOL CELLULARE & MOL L CALIF/I-80131 NAPLES//ITALY/; UNIV NAPLES FEDERICO II,CATTEDRA UROL/I-80131 NAPLES//ITALY/; UNIV PISA,DIPARTIMENTO PATOL SPERIMENTALE BIOTECNOL MED INF/I-56126 PISA//ITALY/
Journal: INTERNATIONAL JOURNAL OF ONCOLOGY, 2000, V17, N1 (JUL), P167-171
ISSN: 1019-6439 Publication date: 20000700
Publisher: PROFESSOR D A SPANDIDOS, 1, S MERKOURI ST, EDITORIAL OFFICE, ATHENS 116 35, GREECE
Language: English Document Type: ARTICLE
Abstract: The prostate specific antigen (PSA) content, the neuroendocrine differentiation and the Lewis(y) and the expression of related carbohydrate antigens in pathological prostatic tissues were determined. These included 13 cancers and 11 benign hyperplasias. PSA is expressed strongly in hyperplastic and poorly in neoplastic tissues. The neuroendocrine differentiation detected by a monoclonal antibody directed against chromogranin A (CgA) is a frequent event in carcinomas and rare in hyperplastic prostate. The Lewis(y) and related carbohydrate antigens, evaluated by the reactivity of the tissues to two monoclonal antibodies MAbB3 and MAbB1, are expressed in a considerable percentage in **malignant** tissues of **prostate** and only occasionally in benign lesions. Our results suggest that immunoblotting with antibodies against CgA, B3 and B1 on the tissues, obtained after surgery, may be useful to obtain more information on the neoplastic transformation of human prostate. Furthermore, the expression of Lewis(y) and related carbohydrate antigens on the surface of **prostate cancer** suggest that, following a clinical trial, an immunotoxin combination of MAbB3 or MAbB1 and Pseudomonas exotoxin, may be used in the **treatment** of **prostate cancer**.

...Abstract: tissues to two monoclonal antibodies MAbB3 and MAbB1, are expressed in a considerable percentage in **malignant** tissues of **prostate** and only occasionally in benign lesions. Our results suggest that immunoblotting with antibodies against CgA...

10180641 BIOSIS NO.: 199698635559
Monoclonal antibody PD-41 recognises a **prostate cancer** associated antigen whose expression increases in metastases and following hormonal therapy.
AUTHOR: Bazinet Michel(a); Hamdy Seif M; Begin Louis R; Aprikian Armen G; Fair William R; Wright George L Jr
AUTHOR ADDRESS: (a)Dep. Urology Montreal General Hosp., 1650 Cedar Avenue, Montreal, PQ H3G 1A4**Canada
1995
JOURNAL: International Journal of Oncology 7 (6):p1421-1425 1995
ISSN: 1019-6439
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Tissues of prostatic origin representing variable phenotypes were tested for reactivity to the **prostate cancer** specific mouse monoclonal antibody PD-41. Avidin biotin immunoperoxidase was applied on formalin-fixed, paraffin-embedded tissue sections of 15 benign prostatic hyperplasia (BPH), 23 prostatic intraepithelial neoplasia (PIN), 14 untreated primary adenocarcinoma, 35 diethylstilbestrol (DES) **treated** tumors, 50 lymph node and 11 bone metastases. Specimens were stratified according to the percentage of tumor cells expressing PD-41 antigen and degree of staining intensity, and correlated with PIN grade, Gleason score, flow cytometry (FCM) measured DNA ploidy, and reactivity to other antibodies. In PIN, 4 specimens (17.4%) showed reactivity in a significant number of cells while a few cells were reactive in most cases. PD-41 was significantly reactive (gt 5% of tumor cells) in 88% of nodal metastases and in 73% of bone metastases in contrast to 49% reactivity in primary tumors (p=0.0003). There was a tendency of increased antigen expression in hormonally **treated** primary tumors. In addition, involutional and metaplastic changes in hormonally **treated** cases were reactive in many instances. Semiquantitative evaluation of PD-41 reactivity showed a statistically significant correlation with Gleason score in primary tumors (p=0.007) and in lymph node metastases (p=0.009). Moreover, the PD-41 antibody reacted in metastatic lesions that failed to express both prostatic acid phosphatase and **prostate specific antigen**. These data suggest that monoclonal **antibody** PD-41 merits further investigation to evaluate its potential diagnostic, prognostic and therapeutic role in **prostate cancer**.

Monoclonal antibody PD-41 recognises a **prostate cancer** associated antigen whose expression increases in metastases and following hormonal therapy.

ABSTRACT: Tissues of prostatic origin representing variable phenotypes were

18/3,K,AB/32 (Item 32 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05695915 90019579
Radioimmunoscintigraphy of **prostate cancer**.
Babaian RJ; Lamki LM
Department of Urology, University of Texas M.D. Anderson Cancer Center, Houston 77030.
Seminars in nuclear medicine (UNITED STATES) Oct 1989, 19 (4) p309-21, ISSN 0001-2998 Journal Code: UNY
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL
The development of hybridoma technology has increased research efforts and clinical applications in the area of radioimmunodetection. Despite the many investigative antibodies directed against prostatic tissue or **prostate cancer** cell lines, only two have been tested in clinical trials. A 111In-labeled **antibody** directed against **prostate-specific antigen**, the best available serum **tumor** marker for **prostate cancer** , has shown poor sensitivity in limited clinical radioimmunoimaging trials. Monoclonal antibodies against prostatic acid phosphatase have shown better imaging results, particularly at higher antibody doses (greater than or equal to 40 mg). The limitations of this antibody include the poor results in detecting soft tissue lesions, including the primary lesion; the development of human antimouse antibodies in 50% of the patients at doses greater than or equal to 40 mg; the expense of the antibody; and the fact that better results are currently attainable by other less expensive imaging modalities. If and when a more suitable antibody or fragment is developed, the prospect of improved staging and new **treatments** using immunologic conjugates carrying therapeutic agents may become realities. Until such time, prostatic cancer will be staged with other currently available imaging modalities and conventional therapies with their limitations will remain state of the art.

Radioimmunoscintigraphy of **prostate cancer**.
... in the area of radioimmunodetection. Despite the many investigative antibodies directed against prostatic tissue or **prostate cancer** cell lines, only two have been tested in clinical trials. A 111In-labeled **antibody** directed against **prostate-specific antigen** , the best available serum **tumor** marker for **prostate cancer** , has shown poor sensitivity in limited clinical

18/3,K,AB/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08874338 96434799

Antibody immunoglobulin G (IgG) against human prostatic specific antigen (PSA) as a carrier protein for chemotherapeutic drugs to human prostate tumors: Part 1. A double immunofluorescence analysis.

Sinha AA; Sackrison JL; DeLeon OF; Wilson MJ; Gleason DF

Research Service, Veterans Affairs Medical Center, Minneapolis, MN 55417, USA.

Anatomical record (UNITED STATES) Aug 1996, 245 (4) p652-61, ISSN 0003-276X Journal Code: 4QM

Languages: ENGLISH

Document type: JOURNAL ARTICLE

BACKGROUND: Adenocarcinoma of the prostate (CaP) is the the second highest cause of cancer deaths in U.S. males. Current chemotherapeutic and/or endocrine **treatments** do not specifically and selectively target **tumor** cells of **prostate cancer** and benign prostatic hyperplasia (BPH). We hypothesized that because of the specific binding characteristics of antibody immunoglobulin G (IgG) to human prostatic-specific antigen (PSA), PSA-IgG could function as a carrier protein for conjugated chemotherapeutic drugs and that the immunoconjugate would selectively bind to prostatic epithelial cells and their tumors, but not to epithelial cells of unrelated organs. Our objective was to test the hypothesis using human prostatectomy specimens. METHODS: WE used several derivatives of 5'-fluorouracil, namely, 5'-fluoro- 2'-deoxyuridine (5'-Fu-2'-d), 5'-fluoro-2'-deoxyuridine-5' monophosphate (5'-Fu-2'-d-5'-mp), 5'-fluoro-2'-deoxyuridine-5'-(p-aminophenyl) monophosphate (5'-Fu-2'-d'-5'-amp), to conjugate with rabbit anti-PSA-IgG together with fluorescent markers (such as rhodamine and fluorescein or fluorescein isothiocyanate: FITC). Prostate specimens were obtained from prostatectomy patients who had not been **treated** with cytotoxic drugs before surgery. We evaluated formalin-fixed and paraffin-embedded sections as well as cryostat sections of frozen specimens for localization of PSA-IgG alone and PSA-IgG-drug immunoconjugate using immunoperoxidase (IP) and single and/or double immunofluorescence (IF) localization techniques. RESULTS: Our study showed that the immunoconjugate (PSA-IgG-5'-Fu-2'-d) bound to PSA (molecular size of approximately 34 KDa) on nitrocellulose sheets in Western immunoblots of extracts of BPH and CaP tissues. This binding of immunoconjugate to PSA on immunoblots was similar to that of the unconjugated PSA-IgG. Immunostaining patterns for rabbit anti-PSA-IgG and PSA-IgG-5'-Fu-2'-d immunoconjugate were similar and specific for prostate epithelial cells and their tumors, as revealed by IP techniques. To demonstrate that both the antibody and drug localized in the same group of prostatic epithelial cells, we used an immunoconjugate in which the PSA-IgG was labeled with rhodamine and 5'-Fu-2'-d-5'-amp with FITC. Our study showed that fluorescence for rhodamine and FITC was present in the same group of prostatic epithelial cells. Phase contrast microscopy demonstrated details of prostatic glandular epithelium and connective tissues. Our study showed that fluorescence for rhodamine and FITC and immunostaining by IP techniques were not observed in prostate sections incubated with normal rabbit serum. CONCLUSIONS: We have shown that conjugation of 5'-Fu derivatives to PSA-IgG did not affect either the selectivity or specificity of the antibody for prostatic epithelial cells. Differential immunofluorescence study has shown that PSA-IgG may function as a carrier protein for chemotherapeutic drugs to prostate epithelial cells and their tumors. Furthermore, FITC-labeled 5'-Fu-2'-d did not specifically localize in prostatic glands, kidney, lungs, bladder, or colon. Because of the specificity and selectivity of the

immunoconjugate for prostatic epithelial cells and their tumors, the immunoconjugate could be used in small dosages to **treat** prostatic tumors and such **treatment** would greatly reduce many unpleasant side effects in patients. This is the first report to show that PSA-IgG can function as an organ specific carrier protein for chemotherapeutic drugs to human prostate epithelium and its tumors.

... second highest cause of cancer deaths in U.S. males. Current chemotherapeutic and/or endocrine **treatments** do not specifically and selectively target **tumor** cells of **prostate cancer** and benign prostatic hyperplasia (BPH). We hypothesized that because of the specific binding characteristics of...

... or fluorescein isothiocyanate: FITC). Prostate specimens were obtained from prostatectomy patients who had not been **treated** with cytotoxic drugs before surgery. We evaluated formalin-fixed and paraffin-embedded sections as well...

... prostatic epithelial cells and their tumors, the immunoconjugate could be used in small dosages to **treat** prostatic tumors and such **treatment** would greatly reduce many unpleasant side effects in patients. This is the first report to...

Chemical Name: **Prostate-Specific Antigen**; (**Antibodies**; (Antineoplastic Agents; (Carrier Proteins; (Drug Carriers ; (Fluorescent Dyes; (IgG; (Immunotoxins; (Rhodamines; (Fluorescein-5-isothiocyanate

8/15

30/3,K,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07737873 94181155

Anti-idiotypes against an anti-haloperidol antibody bind to sigma receptors.

Masuzawa N; Togashi S; Itoh N; Kobayashi T; Inazuki G; Fujimaki M; Nakamura H; Nakayama H

Department of Psychiatry, Niigata University School of Medicine, Japan.

Neuroscience research (IRELAND) Oct **1993**, 18 (1) p27-34, ISSN 0168-0102 Journal Code: OAQ

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Anti-idiotypic monoclonal antibodies that interact with the binding site of sigma receptors were generated. First, BALB/c mice were immunized with a haloperidol-bovine serum albumin **conjugate** , and monoclonal anti-haloperidol **antibodies** that recognize the piperidinyl moiety of haloperidol molecule were obtained. Second, for generation of anti-idiotypic antibodies, BALB/c mice were immunized with the anti-haloperidol monoclonal **antibodies coupled** to **keyhole limpet hemocyanin** . Anti-idiotypic antisera and three hybridomas secreting anti-idiotypic monoclonal antibodies were obtained. All of them were shown to inhibit [3H]haloperidol binding to the anti-haloperidol antibodies. The anti-idiotypes were potent in displacing the binding of [3H]haloperidol to rat brain sigma receptors. Furthermore, they significantly immunoprecipitated the sigma receptors from a detergent-solubilized preparation. These findings demonstrate the generation of anti-idiotypic monoclonal antibodies specifically interacting with membrane-bound and solubilized sigma receptors.

Oct **1993**,

... receptors were generated. First, BALB/c mice were immunized with a haloperidol-bovine serum albumin **conjugate** , and monoclonal anti-haloperidol **antibodies** that recognize the piperidinyl moiety of haloperidol molecule were obtained. Second, for generation of anti-idiotypic antibodies, BALB/c mice were immunized with the anti-haloperidol monoclonal **antibodies coupled** to **keyhole limpet hemocyanin** . Anti-idiotypic antisera and three hybridomas secreting anti-idiotypic monoclonal antibodies were obtained.

```
? ds


Set     Items   Description
S1    1165264   ANTIBOD?
S2       3760   KEYHOLE(W)LIMPET(W)HEMOCYANIN
S3       2722   S1 AND S2
S4     996659   CONJUGAT? OR LINK?
S5       1284   S3 AND S4
S6      23978   IDIOTYP?
S7        117   S5 AND S6
S8         89   RD (unique items)
S9         80   S8 AND PY<=1998
S10     24736   PSA OR PROSTATE(W)SPECIFIC(W)ANTIGEN
S11         0   S9 AND S10
S12         4   S5 AND S10
S13         2   RD (unique items)
S14       731   ANTIBOD?(5N)(KEYHOLE(W)LIMPET(W)HEMOCYANIN)
S15       341   S14 AND S4
S16         1   S15 AND S10
S17         0   S ANTIBOD?(5N)(LINK? OR CONJUGAT?)
S18     40178   ANTIBOD?(5N)(LINK? OR CONJUGAT?)
S19       318   S18 AND S2
S20       285   S19 AND PY<=1998
S21        96   S20 AND S14
S22        71   RD (unique items)
S23        62   S22 AND PY<1998
S24        62   RD (unique items)
? s s18 and s14

          40178  S18
            731  S14
     S25    108  S18 AND S14
? s s25 and py<1998

Processing
            108  S25
       31212866  PY<1998
     S26    85  S25 AND PY<1998
? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.
...examined 50 records  (50)
...completed examining records
     S27    62  RD (unique items)
? s antibod?(2n)(linked or conjugated or coupled)

         1165264  ANTIBOD?
          425914  LINKED
           82422  CONJUGATED
          551549  COUPLED
     S28  13479  ANTIBOD?(2N)(LINKED OR CONJUGATED OR COUPLED)
? s s27 and s28

             62  S27
          13479  S28
     S29    10  S27 AND S28
```

? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.
...completed examining records
S30 10 RD (unique items)
? t s30/3,k,ab/1-10

30/3,K,AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08179841 94147384
Immunogenicity in rabbits and mice of an **antibody**-chelate **conjugate** : comparison of (S) and (R) macrocyclic enantiomers and an acyclic chelating agent.
Watanabe N; Goodwin DA; Meares CF; McTigue M; Chaovapong W; Ransone CM; Renn O
Nuclear Medicine Service, VA Medical Center, Palo Alto 94304.
Cancer research (UNITED STATES) Feb 15 **1994**, 54 (4) p1049-54, ISSN 0008-5472 Journal Code: CNF
Contract/Grant No.: R01-CA 48282, CA, NCI; R01-CA28343, CA, NCI; R01-CA16861, CA, NCI; +
Languages: ENGLISH
Document type: JOURNAL ARTICLE
The macrocyclic bifunctional chelating agent 2-(p-bromoacetamidobenzyl)-1